



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,278	06/20/2003	Carlo Licata		6350

32301 7590 03/16/2005

CATALYST LAW GROUP, APC  
4330 LA JOLLA VILLAGE DRIVE SUITE 220  
SAN DIEGO, CA 92122

EXAMINER
----------

BARRY, CHESTER T

ART UNIT	PAPER NUMBER
----------	--------------

1724

DATE MAILED: 03/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/600,278

Applicant(s)

LICATA ET AL.

Examiner

Chester T. Barry

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-98 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-98 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2/7/05 10/23/03
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

Claims 1 – 15, 17, 21, 23, 24, 26, 29, 32, 35-47 are rejected under 35 USC Sec. 102(b) as anticipated by OTTENHEYM.

USP 3931002 to OTTENHEYM et al. describes a method of removing a heavy metal from a composition, comprising: (a) providing a fibrous protein fiber, e.g., keratin col 2 line 5 / belly wool col 2 line 44; (b) agitating the fibrous protein fiber, col 2 line 54; (c) making a slurry of the agitated fibrous protein fiber, col 2 line 54; (d) contacting the agitated fibrous protein fiber slurry with a composition containing a heavy metal ion or a heavy metal ion complex, "solution to be treated" containing mercury col 2 lines 47, 53-54; and (e) filtering a supernatant produced in step (d), e.g., by passing the slurry through a bed of treated wool, Examples I – III, to remove the heavy metal from the composition bound to fibrous protein in the supernatant. Per claims 4 – 7, chicken feathers are taught at col 5 line 6. Per claim 14, a chloro gold complex is taught at col 4 line 48. Per at least claims 23, 24, 26, "stirring" (col 2 line 54) is a form of mechanical mixing. Per claims 29, 32, the pH of the solution is alkaline, e.g., pH = 7.5 col 4 line 58.

Per claims 15, 17, the concentration of fibrous protein in the slurry is 50000 mg per 5000 mL, or 10 mg / mL. See Example I.

Per claims 35 – 38, the reference teaches contacting the metal-laden liquid with the treated wool at ambient pressure, so the pressure is less than 10 psi. The contact temperature is about 45 C (Example I).

Per claims 39 – 44, the concentration of metal is about 3 ppm. Col 4 line 40. See also col 4 line 3.

Per claims 45-47, reduction of eh wool is taught before contacting the wool with the metal-laden solution.

Claims 1, 18 - 20, 29 – 34, 52 - 67 are rejected under 35 USC Sec. 103(a) as obvious over OTTENHEYM. The ref. teaches that an optimum pH exists and that it depends on the metal removed. Col 3 line 66. It would have been obvious, therefore, to have varied the pH, a known result-effective processing variable, to optimize the processing conditions. Per claims 18 – 20, the reference teaches use of finely divided fibrous material in the beds (col 5 line 9). It would have been obvious, therefore, to have use fibrous materials that fall within the claimed ranges because such sized materials would be described as "finely divided."

Claims 68 – 98 are allowable over the prior art.

Claims 1-98 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-29 of U.S. Patent No. 6685838 taken in view of OTTENHEYM. Although the conflicting claims are not identical, they are not patentably distinct from each other because optimization of pH, fiber size,

Art Unit: 1724

pressure, and selection of heavy metal contaminant are known result-effective variables, as shown by OTTENHEYM. This rejection may be overcome by the filing of an appropriate terminal disclaimer.

CHESTERT. BARRY  
PRIMARY EXAMINER

A handwritten signature in black ink, appearing to read 'Chestert. Barry', with a long, sweeping horizontal line extending to the right.

571-272-1152